

# Notice of Allowability

## Application No.

10/797,617

## Examiner

ANDRAE S. ALLISON

## Applicant(s)

RHOADS ET AL.

## Art Unit

2624

### - The MAILING DATE of this communication appears on the cover sheet with the correspondence address-

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 01/26/2011.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-5, 8, 10-11 and 15-24 now renumbered 1-18.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_.
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20120311.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

/Andrae S Allison/  
Examiner, Art Unit 2624

## DETAILED ACTION

### *Response to Amendment*

1. The Office Action has been made issued in response to amendment filed January 26, 2011. Claims 1-6, 8, 10-11 and 15-24 are pending.

### EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Christopher L Kalafut (Reg#: 57,946) on March 09, 2012.

The application has been amended as follows:

Replace claim 1 with the following:

1. (Currently Amended) A method comprising:

detecting, with a processor of a computing device, one or more registration signals from image data, wherein the image data includes electronic signals, and wherein the detecting includes processing the electronic signals to detect the one or more registration signals in the electronic signals;

adding, with the processor of the computing device, two or more image blocks together from the image data to increase a signal-to-noise ratio of the one or more registration signals;

determining, with the processor of the computing device, one or more frequency properties of the image data;

identifying, with the processor of the computing device, a geometric transformation to which the image data is subjected based at least in part on the one or more detected registration signals and the one or more frequency properties; and

using the identified geometric transformation to compute registered image data.

combining the plurality of blocks to reconstruct an image corresponding to the image data.

Replace claim 8 with the following:

8. (Currently Amended) A device comprising:

registration signal detecting means for detecting one or more registration signals from image data;

adding means for adding two or more image blocks together from the image data to increase a signal-to-noise ratio of the one or more registration signals;

frequency property determining means for determining one or more frequency properties of the image data;

geometric transformation identifying means for identifying a geometric transformation to which the image data is subjected based at least in part on the one or more detected registration signals and the one or more frequency properties; and

geometric transforming means for using the identified geometric transformation to compute registered image data.

Replace claim 10 with the following:

10. (Currently Amended) A ~~tangible non-transitory~~ computer readable medium having computer-readable instructions stored thereon, the instructions comprising:

instructions to detect one or more registration signals from image data;

instructions to add two or more image blocks together from the image data to increase a signal-to-noise ratio of the one or more registration signals;

instructions to determine one or more frequency properties of the image data;

instructions to identify a geometric transformation to which the [[said]] image data is subjected based at least in part on the one or more detected registration signals and the one or more frequency properties; and

instructions to use the identified geometric transformation to compute registered image data.

Replace claim 11 with the following:

11. (Currently Amended) A device comprising:

a memory configured to store image data; and

a processor operatively coupled to the memory and configured to:

detect one or more registration signals from the image data;

add two or more image blocks together from the image data to increase a signal-to-noise ratio of the one or more registration signals;

determine one or more frequency properties of the image data;

identify a geometric transformation to which the image data is subjected based at least in part on the one or more registration signals and the one or more frequency properties; and

use the identified geometric transformation to compute registered image data.

Replace claim 15 with the following:

15. (Currently Amended) A method comprising:

transforming, with a processor of a computing device, a media signal into a frequency domain to produce one or more frequency components of the media signal;

detecting an embedded signal in the one or more frequency components;

adding two or more data blocks together from the media signal to increase a signal-to-noise ratio of the embedded signal;

based on the detecting, determining one or more geometric transformation parameters defining a geometric transformation of the media signal; and

using the one or more geometric transformation parameters to transform the media signal.

Replace claim 23 with the following:

23. (Currently Amended) A ~~tangible~~ non-transitory computer readable medium having computer-readable instructions stored thereon, the instructions comprising:

instructions to transform a media signal into a frequency domain to produce one or more frequency components of the media signal;

instructions to detect an embedded signal in the one or more frequency components;

instructions to add two or more data blocks together from the media signal to increase a signal-to-noise ratio of the embedded signal;

instructions to determine, based on the detecting, one or more geometric transformation parameters defining a geometric transformation of the media signal; and

instructions to use the one or more geometric transformation parameters to transform the media signal.

Replace claim 24 with the following:

24. (Currently Amended) A device comprising:

a memory configured to store a media signal; and

a processor operatively coupled to the memory and configured to:

transform the media signal into a frequency domain to produce one or more frequency components of the media signal;

detect an embedded signal in the one or more frequency components;

add two or more data blocks together from the media signal to increase a signal-to-noise ratio of the embedded signal;

determine, based on the detecting, one or more geometric transformation parameters defining a geometric transformation of the media signal; and

use the one or more geometric transformation parameters to transform the media signal.

### ***Allowance***

3. Claims 1-6, 8, 10-11 and 15-24 are now renumbered claims 1-18 are allowed.
4. The following is an examiner's statement of reasons for allowance: None of the cited prior art of record teaches or fairly disclose: adding, with the processor of the computing device, two or more image blocks together from the image data to increase a signal-to-noise ratio of the one or more registration signals and identifying, with the processor of the computing device, a geometric transformation to which the image data is subjected based at least in part on the one or more detected registration signals and the one or more frequency properties.
5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Inquiries***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDRAE S. ALLISON whose telephone number is (571)270-1052. The examiner can normally be reached on Monday-Friday, 8:00 am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571) 272-7223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrae S Allison/  
Primary Examiner, Art Unit 2624  
March 19, 2011